Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for receiving signals ~~in a wireless communication system, the method~~ comprising:

receiving a plurality of user signals in a shared spectrum;

producing samples of the received user signals as a received vector;

segmenting the received vector into a plurality of segments;

for each segment, successively determining symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment; and

assembling the determined symbols corresponding to each segment into a data vector.

2. (previously presented) The method of claim 1 wherein each segment has a portion overlapping with at least one other segment.

3. (previously presented) The method of claim 2 wherein the overlapping portion is at least two chips less than twice an impulse response length.

4. (original) The method of claim 2 further comprising storing each segment determined symbols, after truncating determined symbols.

5. (original) The method of claim 1 wherein the successively determining symbols for each user comprises equalizing an input vector, despreading the equalized vector and making hard decisions on the despread equalized vector.

6. (original) The method of claim 5 wherein the equalizing the input vector uses fast Fourier transforms.

7. (currently amended) A method for receiving signals ~~in a wireless communication system, the method~~ comprising:

receiving a plurality of signals in a shared spectrum;

producing samples of the received signals as a received vector;

segmenting the received vector into a plurality of segments;

grouping the received signals by received power level;

for each segment, successively determining symbols for each group by determining symbols for one group and removing a contribution of that one group from the corresponding segment; and

assembling the determined symbols corresponding to each segment into a data vector.

8. (previously presented) The method of claim 7 wherein each segment has a portion overlapping with at least one other segment.

9. (previously presented) The method of claim 8 wherein the overlapping portion is at least two chips less than twice an impulse response length.

10. (original) The method of claim 8 further comprising storing each segment determined symbols, after truncating determined symbols.

11. (original) The method of claim 7 wherein the successively determining symbols for each user comprises equalizing an input vector, despreading the equalized vector and making hard decisions on the despread equalized vector.

12. (original) The method of claim 11 wherein the equalizing the input vector uses fast Fourier transforms.

13. (currently amended) A wireless transmit/receive unit (WTRU) comprising:

an antenna configured to receive a plurality of user signals in a shared spectrum;

a sampling device configured to produce samples of the received user signals as a received vector;

a segmentation device configured to segment the received vector into a plurality of segments;

an [[a]] equalization and successive interference canceller configured to successively determine for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment; and

a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector.

14. (previously presented) The WTRU of claim 13 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

15. (previously presented) The WTRU of claim 14 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that the overlapping portion is at least two chips less than twice an impulse response length.

16. (previously presented) The WTRU of claim 14 further comprising a segment storing device configured to store each segment determined symbols, after truncating determined symbols.

17. (previously presented) The WTRU of claim 16 wherein the equalization and successive interference canceller comprises an equalizer configured to equalize an input vector, a despreader configured to despread the equalized vector and a hard decision device configured to make hard decisions on the despread equalized vector.

18. (previously presented) The WTRU of claim 17 wherein the equalizer is configured to equalize the input vector using fast Fourier transforms.

19. (previously presented) A wireless transmit/receive unit (WTRU) comprising:

means for receiving a plurality of user signals in a shared spectrum;

means for producing samples of the received user signals as a received vector;

means for segmenting the received vector into a plurality of segments;

means for successively determining for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment; and

means for assembling the determined symbols corresponding to each segment into a data vector.

20. (previously presented) The WTRU of claim 19 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

21. (previously presented) The WTRU of claim 20 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that the overlapping portion is at least two chips less than twice an impulse response length.

22. (original) The WTRU of claim 20 further comprising means for storing each segments determined symbols, after truncating determined symbols.

23. (previously presented) The WTRU of claim 22 wherein the means for successively determining symbols comprises an equalizer means for equalizing an input vector, a despreader means for despreading the equalized vector and a hard decision means for making hard decisions on the despread equalized vector.

24. (original) The WTRU of claim 23 wherein the equalizing the input vector uses fast Fourier transforms.

25. (currently amended) A wireless transmit/receive unit (WTRU) comprising:

an antenna configured to receive a plurality of user signals in a shared spectrum;

a sampling device configured to produce samples of the received signals as a received vector;

a segmentation device configured to segment the received vector into a plurality of segments;

an [[a]] equalization and successive interference canceller, for each group of received signals having a similar power level, configured to successively determine for each segment symbols for each group by determining symbols for one group and removing a contribution of that one group from the corresponding segment; and

a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector.

26. (previously presented) The WTRU of claim 25 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

27. (previously presented) The WTRU of claim 26 wherein the segmentation device is configured to segment the received vector into a plurality of

segments such that the overlapping portion is at least two chips less than twice an impulse response length.

28. (previously presented) The WTRU of claim 26 further comprising a segment storing device configured to store each segment determined symbols, after truncating determined symbols.

29. (previously presented) The WTRU of claim 28 wherein the equalization and successive interference canceller comprises an equalizer configured to equalize an input vector, a despreader configured to despread the equalized vector and a hard decision device configured to make hard decisions on the despread equalized vector.

30. (previously presented) The WTRU of claim 29 wherein the equalizer is configured to equalize the input vector using fast Fourier transforms.

31. (previously presented) A wireless transmit/receive unit (WTRU) comprising:

means for receiving a plurality of signals in a shared spectrum;

means for producing samples of the received signals as a received vector;

means for segmenting the received vector into a plurality of segments;

means for successively determining for each segment symbols for each group of received signals having a similar power level by determining symbols for one group and removing a contribution of that one group from the corresponding segment; and

means for assembling the determined symbols corresponding to each segment into a data vector.

32. (previously presented) The WTRU of claim 31 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

33. (previously presented) The WTRU of claim 32 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that the overlapping portion is at least two chips less than twice an impulse response length.

34. (original) The WTRU of claim 32 further comprising means for storing each segments determined symbols, after truncating determined symbols.

35. (previously presented) The WTRU of claim 34 wherein the means for successively determining symbols comprises an equalizer means for equalizing an input vector, a despreader means for despreading the equalized vector and a hard decision means for making hard decisions on the despread equalized vector.

36. (previously presented) The WTRU of claim 35 wherein the means for equalizing the input vector uses fast Fourier transforms.

37. (currently amended) A base station comprising:

an antenna configured to receive a plurality of user signals in a shared spectrum;

a sampling device configured to produce samples of the received user signals as a received vector;

a segmentation device configured to segment the received vector into a plurality of segments;

an [[a]] equalization and successive interference canceller configured to successively determine for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment; and

a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector.

38. (previously presented) The base station of claim 37 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

39. (previously presented) The base station of claim 38 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that the overlapping portion is at least two chips less than twice an impulse response length.

40. (previously presented) The base station of claim 38 further comprising a segment storing device configured to store each segment determined symbols, after truncating determined symbols.

41. (previously presented) The base station of claim 40 wherein the equalization and successive interference canceller comprises an equalizer configured to equalize equalizing an input vector, a despreader configured to despread the equalized vector and a hard decision device configured to make hard decisions on the despread equalized vector.

42. (previously presented) The base station of claim 41 wherein the equalizer is configured to equalize the input vector using fast Fourier transforms.

43. (previously presented) A base station comprising:

means for receiving a plurality of user signals in a shared spectrum;

means for producing samples of the received user signals as a received vector;

means for segmenting the received vector into a plurality of segments;

means for successively determining for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from the corresponding segment; and

means for assembling the determined symbols corresponding to each segment into a data vector.

44. (previously presented) The base station of claim 43 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

45. (previously presented) The base station of claim 44 wherein the means for segmenting is configured to segment the received vector into a plurality of

segments such that the overlapping portion is at least two chips less than twice an impulse response length.

46. (original) The base station of claim 44 further comprising means for storing each segments determined symbols, after truncating determined symbols.

47. (previously presented) The base station of claim 46 wherein the means for successively determining symbols comprises an equalizer means for equalizing an input vector, a despreader means for despreading the equalized vector and a hard decision means for making hard decisions on the despread equalized vector.

48. (previously presented) The base station of claim 47 wherein the means for equalizing the input vector uses fast Fourier transforms.

49. (currently amended) A base station comprising:

an antenna configured to receive a plurality of user signals in a shared spectrum;

a sampling device configured to produce samples of the received signals as a received vector;

a segmentation device configured to segment the received vector into a plurality of segments;

an [[a]] equalization and successive interference canceller, for each group of received signals having a similar power level, configured to successively determine for each segment symbols for each group by determining symbols for one group and removing a contribution of that one group from the corresponding segment; and

a segment reassembly device assembling the determined symbols corresponding to each segment into a data vector.

50. (previously presented) The base station of claim 49 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

51. (previously presented) The base station of claim 50 wherein the segmentation device is configured to segment the received vector into a plurality of segments such that the overlapping portion is at least two chips less than twice an impulse response length.

52. (previously presented) The base station of claim 50 further comprising a segment storing device configured to store each segment determined symbols, after truncating determined symbols.

53. (previously presented) The base station of claim 51 wherein the equalization and successive interference canceller comprises an equalizer configured to equalize an input vector, a despreader configured to despread the equalized vector and a hard decision device configured to make hard decisions on the despread equalized vector.

54. (previously presented) The base station of claim 53 wherein the equalizer is configured to equalize the input vector using fast Fourier transforms.

55. (previously presented) A base station comprising:

means for receiving a plurality of signals in a shared spectrum;

means for producing samples of the received signals as a received vector;

means for segmenting the received vector into a plurality of segments;

means for successively determining for each segment symbols for each group of received signals having a similar power level by determining symbols for one group and removing a contribution of that one group from the corresponding segment; and

means for assembling the determined symbols corresponding to each segment into a data vector.

56. (previously presented) The base station of claim 55 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that each segment has a portion overlapping with at least one other segment.

57. (previously presented) The base station of claim 56 wherein the means for segmenting is configured to segment the received vector into a plurality of segments such that the overlapping portion is at least two chips less than twice an impulse response length.

58. (original) The base station of claim 56 further comprising means for storing each segments determined symbols, after truncating determined symbols.

59. (previously presented) The base station of claim 58 wherein the means for successively determining symbols comprises an equalizer means for equalizing

an input vector, a despreader means for despreading the equalized vector and a hard decision means for making hard decisions on the despread equalized vector.

60. (previously presented) The base station of claim 59 wherein means for the equalizing the input vector uses fast Fourier transforms.

61. (previously presented) An integrated circuit comprising:

a segmentation device configured to segment a received vector of a plurality of user signals into a plurality of segments;

an equalization and successive interference canceller configured to successively determine for each segment symbols for each user by determining symbols for one user and removing a contribution of that one user from the respective segment; and

a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector.

62. (previously presented) The integrated circuit of claim 61 wherein the equalization and successive interference canceller comprises an equalizer configured to equalize an input vector, a despreader configured to despread the equalized vector and a hard decision device configured to make hard decisions on the despread equalized vector.

63. (previously presented) An integrated circuit comprising:

a segmentation device configured to segment a received vector of a plurality of signals into a plurality of segments;

an equalization and successive interference canceller, for each group of received signals having a similar power level, configured to successively determine for each segment symbols for each group by determining symbols for one group and removing a contribution of that one group from the respective segment; and

a segment reassembly device configured to assemble the determined symbols corresponding to each segment into a data vector.

64. (previously presented) The integrated circuit of claim 63 wherein the equalization and successive interference canceller comprises an equalizer configured to equalize an input vector, a despreader configured to despread the equalized vector and a hard decision device configured to make hard decisions on the despread equalized vector.